

1       **51979/RVW/V186**

ABSTRACT OF THE DISCLOSURE

5       A system that controls a back reaming operation of a  
drilling rig is provided that includes a hoisting system that  
moves a drill pipe during a back reaming operation at a  
hoisting speed and a hoisting torque. The hoisting system  
comprises at least one back reaming parameter sensor for  
measuring a corresponding at least one back reaming parameter.  
10   An operator control unit allows an operator to input a  
predetermined value of the at least one back reaming parameter  
therein. A back reaming parameter sensor obtains the measured  
value of the at least one back reaming parameter. A control  
system monitors the at least one back reaming parameter. A  
15   braking assembly resists the hoisting torque of the drawworks  
system when the measured value of the at least one back  
reaming parameter equals the predetermined value of the at  
least one back reaming parameter.

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